

THE FARMER & GARDENER, AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY L. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT \$5 PER ANNUM, IN ADVANCE.

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Vol. I

This publication is the successor of the late **AMERICAN FARMER**, (which is discontinued,) and is published at the same office, at five dollars per year, payable in advance. When this is done, 50 cents worth of any kind of seeds or hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, DECEMBER 9, 1834.

THE KENT BUGLE.—Capt. Wm. P. Matthews, of Kent County, Md. will shortly issue a new weekly paper, under the above musical title, to be devoted in part to Agriculture and its kindred sciences. Capt. M. wields his pen with good effect, as our columns have occasionally proved, and we anticipate for him entire success in his new undertaking. May his Bugle "discourse eloquent music" to our country's friends, but "sounds terrific" to its foes, whether external or internal.

Cotton rose in Liverpool, in the second week in November, $\frac{1}{2}$ to $\frac{1}{4}$ d. per pound.

INTERNAL IMPROVEMENT.—The Baltimore & Ohio Rail-road, was, on the 1st inst. formally opened for travel from the Point of Rocks to Harper's Ferry, making its entire length from Baltimore 82 miles. This is, we believe, the longest continuous Rail-road yet constructed. Those who have had the management of its construction, particularly the indefatigable president, Philip E. Thomas, deserve, in our opinion, great commendation for their industry, perseverance and patience, in overcoming obstructions and difficulties, not only of a physical nature, but those also arising from prejudice and adverse interest. We hope the stockholders will be well remunerated for their investments, and we are sure the public will derive great advantage from this and other similar works.

Pedigree of the Improved Durham Short-Horned Bull BRUCE.

[Sold from the American Farmer Establishment to the Rev. J. Kirkpatrick, of Cumberland county, Va.]

Bruce, a dun and white bull, bred by Dr. David Hosack, of Hyde Park, N.Y. was got by Matchem, out of Canada.

Matchem, was got by Regent, an imported bull,

out of Flora, an imported cow, a great milker and valuable breeder.

Regent, (imported) was by Regent, a son of the celebrated (old) Favorite, the sire of Comet, dam by Favorite.

Flora, (dam of Matchem) was by George, out of Phillis, and she by Petrarch.

George, was got by Phenomenon, he by Favorite, a son of old Favorite, the sire of Comet.

Canada, (dam of Bruce) was imported in May, 1824, (in the ship Canada of New York), got by Sir Peter, dam by Constellation, g. d. by Young Washington.

Sir Peter, was by Petrarch, dam Princess, by Favorite.

Constellation, was by Comet, Collings' famous bull, that was sold for 1000 guineas, out of Countess, by Favorite, that sold for 400 guineas.

Pedigree of the Improved Durham Short Horned Heifer LADY JANE.

[Sold as above.]

Lady Jane, a red and white Heifer, bred by Dr. David Hosack, of Hyde Park, N. Y. calved April 1, 1833, was got by McDuff, out of Lady Hazel.

McDuff, got by Malcom, (bred by J. Whitaker, Esq.) dam Anabella (bred by Col. Trotter) by Pyramus, g. d. Aurora by Comet, gr. g. d. Marcella, by son of Favorite, gr. gr. g. d. by son of Favorite, gr. gr. gr. g. d. by Hollon.

Malcom, bred by J. Whitecar Esqr. calved in 1823 (and imported in 1825), was got by Enchanter, dam Western Lady, by Western Comet, g. d. by Western Comet, gr. g. d. by Western Comet, gr. gr. g. d. Haughton (for whose pedigree see Herd Book.)

Lady Hazel, was sired by Favorite, (jr.) out of Young Favorite; Favorite (jr.) was by Capsall, and he by old Favorite, the sire of Comet.

Young Favorite, (dam of Lady Hazel) was bred by Samuel Scott, near Liverpool, Eng., and imported by Anthony Dey, Esq. in 1825.

Pedigree of the Improved Durham Short Horned Heifer CAROLINE.

[Sold from the American Farmer Establishment, to Dr. S. D. Martin, of Kentucky.]

Caroline, a red and white Heifer, bred by Dr. David Hosack, of Hyde Park, N. Y. calved April

7, 1833, was got by Matchem, out of Young Beauty.

Matchem, was got by Regent, an imported bull, out of Flora, an imported cow, a great milker and valuable breeder.

Regent, (imported) was by Regent, a son of the celebrated (old) Favorite, the sire of Comet, dam by Favorite.

Flora, (dam of Matchem) was by George, out of Phillis, and she by Petrarch.

George, was got by Phenomenon, he by Favorite, a son of old Favorite, the sire of Comet.

Young Beauty, was by (imported) Regent, out of Flora, the great milker, and full sister of Matchem.

REMARKABLE PRODUCTION.—The season has arrived for large squashes, large beets, large turnips, &c., and for still larger stories about them. We have our share of these wonders, and are determined not to be outdone by our contemporaries in description. To begin then, we have three monstrous turnips, four awful great mangel wurtzels, six tremendous potatoes, and an almighty big egg plant. Of the turnips, two are of the kind called Dale's new hybrid, grown by C. Smith, Esq. of Georgetown, D.C. who is an excellent cultivator, and a competent judge of such products, and he thinks this new turnip a very great acquisition to our country. It succeeded much better with him than any other kind of turnip, and he thinks it equal to any other both for table and live stock. The other turnip, which is a *white flat*, (we do not mean a dandy)—and two of the mangel wurtzel roots were produced by Capt. Wm. P. Matthews, of Chestertown, Md., whose attention to, and therefore success in such matters, have become well known. The potatoes were sent us by A. W. Ringgold, Esq. of Rock Hall, Md. They are of the kind called blue skins, and weigh from one pound to one pound nine ounces each, a large size for that variety. We shall be happy to receive and exhibit at our Horticultural Society's room any Saturday morning, all such remarkable productions as our friends may favor us with. They attract attention, serve to stimulate farmers and gardeners, and last and least, they afford us matter for a paragraph.

THE FARMER.

A NEW PLAN FOR CULTIVATING THE SCUPPERNONG VINE.

To the Editor of the Farmer and Gardener.

Sir.—In offering for your valuable paper some suggestions headed as above, I may be presumptuous, as there may be found nothing, strictly speaking, new in my plan. But such a one only as has been virtually adopted by many others, in cultivating the Scuppernong and other native vines of very luxuriant growth.

Yet such a one as it is, taken as a *whole*, I have never seen mentioned in print. The plan is this:—to give the vines a wide or due distance; in planting to make *deep trenches* one way, by repeated furrows of the plow, instead of the tedious process of digging holes with the spade, and to plant *suitable trees*, not by the vine, but at due interval distances, for eventually helping to sustain the vines or the scaffolding over them. I say a *new plan taken as a whole*: for the parts, except the last, I have seen detailed in the columns of the "American Farmer." As to the first part, a writer from the lower part of this state, recommends thirty feet as a suitable distance for planting the Scuppernong. And as to the second, Mr. Herbemont shows the peculiar advantages of planting vines in deepened hollows, and gradually filling them up as the vines grow. He mentions, the case of a gentleman having practised this method, whose vines consequently were not affected by the vicissitudes of too wet or too dry a season, but never failed to yield well. Planting trees, too, immediately *aside* of vines, I have seen recommended, but not at *interval* distances.

Before proceeding to exhibit the particulars of my plan, I would premise an observation or two, in regard to the growth of Scuppernong vines.

The growth of this vine is not so rapid at first as that of some others. Some other kinds, such as the Halifax and Cobswine I have had to grow, when grafted to a good stock, upwards of 20 feet in a summer. This season a scion of Herbemont's Madeira, grafted, grew from the middle of May, until the middle of October, 30 feet, and there were corresponding collateral branches; and I add, bore several fine clusters of grapes.—But 12 and 14 feet is the common growth with me, of the Scuppernong when grafted; and when planted from a rooted layer, 7 and 8 feet the first season. But this kind of vine, like the growth of some trees, such as the oak, destined to be eventually great, although slow at first in making the start, yet after a year or two, makes gradual and *increasingly rapid strides* in extending its branches. If therefore, with an eye to this fact, due distances are not allowed at first, in a few years the *canopies* the vines form, will be too much crowded. In one part of my vineyard, Scuppernong vines of four years growth, planted 16 feet apart, extend branches from one to another on arbour coverings 10 feet high. Capt. Burlingham, the cultivator of the celebrated Scuppernong vineyard near Louisburg, (N. C.) advised to plant at 10 feet distance each way. I did so in a part of my vineyard, but now I am induced to remove every other vine, and plant them elsewhere, hav-

ing first cut off all the upper growth, except a few inches from the root.

Indeed it appears that the before named noted cultivator of the Scuppernong, before his death (which happened recently) found himself in an error in regard to the too near distance of some of his own vines, all of which were planted more than 10 feet apart. Here pardon the digression, when I mention that the gentleman who now owns the estate of the deceased, above named, stated to me a few days since, that a half acre of the vineyard (some of the vines of which were planted about 14 years, and others at a later period) was good, one year with another, for 20 barrels of wine, and still increasing the quantity, as ascertained by the late owner. By one year with another, it is not to be understood, that the Scuppernong ever fails to bear, (for as it does not blossom till June in this climate, no frosts can injure its fruit) but that it bears more abundantly some years than others. For instance in some seasons a quarter of an acre of the above named vineyard, yielded 500 gallons of wine. The past season, the Scuppernong vines in my vineyard, were literally loaded with fruit of the finest flavour and largest growth. As a matter of curiosity I had one of the grapes measured and weighed by a neighbour. It measured 3½ inches in circumference, and weighed 2 dr. or 120 gr.

Here we inquire whether land could be more profitably occupied with any other growth than of Scuppernong vines? At a dollar a gallon, the market price for this very healthful, delicious wine, 1200 dollars are annually yielded from a single acre of ground, as above stated, and brought to this enormous produce, in less time than it is necessary to make an apple orchard even *begin* to be profitable by brandy making; and we might add, *begin* to contribute its stream to the river of ardent spirit, sweeping human destruction in its overflowing course. And we may safely say, that 200 dollars will cover the costs of casks, labour and sugar; leaving a clear profit of 1000 dollars per acre. Query—What should such an acre sell at, if we allow the 1000 dollars as interest for the value?

And according to Mr. Prince's statement that the Scuppernong grapes ripen as regularly as others on Long Island, (N.Y.) I would venture to assert that any where in the state of Maryland, due care in the cultivation of the Scuppernong, would eventually realize a profit like the above mentioned.

But to return from this digression (longer than intended) to my new plan. Enough has been said I presume, as to the importance of giving due distance in planting the Scuppernong; and little need be added I trust, as to the second part of my plan, viz: plowing in one direction repeatedly, until a hollow of considerable depth and breadth be made, preparatory to planting the vines. Besides Mr. Herbemont's, or the very respectable authority before quoted, the experience of others might be referred to regarding the vines producing with certainty. But there are other advantages; much labour in digging is saved. According to the common method of digging with a spade holes 2 feet wide and 2 deep, not a little tedious toil is incurred. But the plow does the business speedily, and when done effectually very

little or no opening with the spade is necessary previous to planting the vines. Again, if the planting be on a hill side, (often a favourable situation for the vine) there is little danger of the soil washing away, when this plowing is done horizontally. And when the ground is not sufficiently rich, a fine opportunity of manuring effectually is presented, by spreading it all along the bottom of the hollow, and then covering it by turning a few furrows back after the vines are planted. As the roots of vines are generally co-extensive with their branches, they will as the vine grows, luxuriate all along where the manure is deposited. Or if the ground be already sufficiently strong, some of the surface soil to answer the same end, may be turned into the bottom of the plowed trench. I can say nothing as to my own experience in regard to the above, except that I planted, as just suggested, about 100 Scuppernong vines last spring, on a hill side of considerable declivity, and that their growth, (notwithstanding the severe drought here) 6 and 8 feet generally, realized my expectation. In planting I had of course, in one direction, to follow the horizontal windings. But the contrary way, or across the horizontal lines, I placed the vines in regular or straight rows. It is needless perhaps, to observe here, that the interval ground is to be cultivated in horizontal drills; (I cultivated the above in cotton.) But thinking even this plant (not to name corn or other of a higher growth) too shady for the unchecked growth of the vine, particularly when quite young, I intend to cultivate in preference, Cabbage, Mangel Wurtzel and Ruta Baga, or such plants as will not shade the ground near the vines.

I proceed to the last particular of my plan. I would premise, that I consider as a general rule, all kinds of trees are detrimental to the growth and fruit of vines when placed near them. The roots of a tree when near a vine, tend to rob it of the nutriment derived from the soil, and the fruit on the branches, shaded by the foliage of the tree, is generally more or less injured.

These observations will apply to the Scuppernong in particular. The vineyard near Louisburg, before named, has not a tree near it, but has an arbour about 8 feet high, over which to spread its luxuriant branches. I make not the foregoing remarks without experience, as well as observation. The result of that experience, so far as made, is that trees in several ways may more than counterbalance the detriment they do the vine, particularly if planted according to the plan stated—that is, if fruit trees in the fruit they will yield; if timber trees, such as the locust, in their eventual profit that way; and any kind of tree in helping endurably to support an arbour for the vine, or the branches of the same by their extending limbs. By *helping* to support the arbour, I mean that each tree after attaining a proper growth, will answer as a post and fork to hold one end of the rail, or piece of timber that supports the lath or crossing poles of the arbour.—The other end of this piece of timber, (about 12 feet long in case of 10 feet distance between the tree and vine) is to be supported by a forked post inserted near the vine, after the removal of the stake, at first placed for training the vine. On this plan, any sort of trees will do little injury to vines.

I intend to plant the New Chinese Mulberry in a part of my extension of vineyard. It might be added perhaps, as one advantage of trees, that they cause a vineyard to appear more beautiful. I will here give some particulars as the ground of the foregoing conclusion. Vines planted by me aside of small trees have done tolerably well, and those grafted to good native stocks even under large trees have succeeded well; vines and trees planted at the same time together, have not generally succeeded to my expectation; some sorts of trees are too rapid in their growth for the vine, but generally the vine grows too fast for the tree and stunts its growth; for instance, the New Chinese Mulberry overpowers the vine—and the vine, an apple tree. I planted some yellow locusts last spring alongside of vines a year old, and from their rapid start the present season, and the continued rapid growth of the vines at the same time, I believe they will both succeed very well. Here I observe that trees, such as the locust of narrow leaf and thin foliage, are much the best calculated for the above purpose, as the reverse of the locust, the New Chinese Mulberry, has leaves too large and thick set to grow along side of vines.—Kinds of trees, such as the oak, very exhausting as to the roots should be rejected; I have Scuppernong vines spreading over cherry trees that do tolerably well, also on peach trees. But those vines planted at a considerable distance from trees, and trained to reach and spread over them have succeeded best on trees with me, hence was suggested the last part of my plan, or that of planting trees regularly at due interval distances; the peculiar advantage of this is, that, in the most critical period of early growth, the tree injures not the vine, nor the vine the tree. But in all cases, trees, by cutting off the limbs when necessary, are to be prevented from attaining too great a size, particularly in height. Here I deem it proper to observe, that much, as to the success of my plan, depends on attentive judgment, and skill in all the details; careful execution alone attains complete success in any plan however well devised; mine however, I consider little else than a hint to be better matured by myself, and if deemed of any value, perhaps by others. To be better understood, I will in conclusion, recapitulate: say then, as a detailed instance of the plan as a whole, you have a piece of ground designed to be planted in Scuppernong vines—having been previously cultivated with a hoed crop, or thoroughly pulverized with the plow, proceed by plowing to make hollows 20 feet apart, and a foot and a half deep in the deepest part—then mark out the places for planting the vines, say 20 feet, a medium distance, in the rows. But if horizontal trenches, this distance will not be quite uniform between all the vines, and in this case, all the trenches of the plot must be first made, and then to make the vines stand in a straight line or in one direction, you must begin the first row directly across the horizontal hollows, or if you please obliquely, which will not leave when done a square of the space made by lines running from four corners occupied by trees and vines. In the places marked for vines, deepen the hollow half a foot, and 2 feet wide, with the spade. If your ground be pretty strong, fill up this half foot with surface earth; otherwise with well rotted manure, or a

compost of rotten wood, well rotted stable manure and ashes—well rotted chip manure is excellent for the purpose; on this put a few inches of surface soil, and then plant your vine, having previously perhaps inserted your stake to support it in its first growth. Then plant a tree between each two vines in the same rows. Next prepare to plant a regular row of trees, by digging holes in the common way, or by running a few furrows equi-distant between the rows of vines, and plant the trees ten feet distant in the rows; or, if the trees are of a kind destined to be large, plant 20 feet apart, which will leave the point or corner 10 feet distance between each tree, to be occupied with a vine, to be afterward removed for the insertion of a forked post when the vines need scaffolding; or that corner may be left vacant, till such time if thought proper. But suffer me to insert here diagrams* by which I made the plan familiar to myself. I use v. for vine, t. for tree, va. for vacant.

	v	t	v	t	v	
	t	va	t	t	t	
	v	t	v	t	v	
20	10	10	t	t	v	
ft	t	va	t	t	va	
	10	10	v	t	v	

20 feet.

On level ground as first suggested.

In fine, Mr. Editor, if you deem this tedious communication worthy a place in your columns, or any part of it, and it should contribute to the more successful and extensive cultivation of the invaluable native vine of the state I inhabit, I shall consider myself abundantly rewarded for the trouble of hastily writing this, amidst a press of cares and business.

Yours, &c. with great esteem,
SIDNEY WELLER.
Brinkleyville, N. C. Nov. 26, 1834.

*We give one of the three diagrams of the manuscript, which serves for an illustration of the plan. The other two requiring curved lines to form them, the printer was unable to represent them by any materials at command. EDITOR.

PREMIUMS.—Among the premiums awarded at the September meeting of the Manchester Agricultural Society, we notice one to a "farming man servant," for having conducted himself to the satisfaction of his employer, for the term of 52 years, and one to a "farmer's dairy woman," for making the greatest quantity of cheese in one year, in proportion to the number of cows, being 101 cwt. from twenty cows.

The Society is in a very flourishing condition, its funds exceeding by one thousand pounds any former period. Its advantages to the Agricultural interests are so decided and important, as proved by long experience, that we should like to see the subject more earnestly considered in this country, and the attention of the farmers in our own State particularly, more fully awakened its importance.

—U. S. Gazette.

PRODUCT OF WOOL.

FROM NILES' WEEKLY REGISTER.

The Philadelphia Price Current estimates the crop of wool in the United States at seventy-five millions of pounds. We think this amount is much over-rated. The committee of the New York Convention of 1831, to whom this subject was referred, estimated the crop of that year at fifty millions; and we then thought, from much personal information on the subject, that the estimate was sufficiently high—the number of sheep being put down at 20 millions. Now at 24 lbs. each, the number must be 30 millions, to yield 75 millions of pounds of wool.

If the latter be correct, how great is the value of the property vested in the growth of wool in the United States. At the rates calculated by the very intelligent committee just alluded to, the aggregates would stand thus—

30,000,000 sheep at \$2 each,	\$60,000,000
10,000,000 acres of land to feed them, at \$10,	* 100,000,000
	\$160,000,000
	† 40,000,000

The capital then vested in the woollen manufactories was estimated at

Fixed capital, \$200,000,000

The committee supposed that the whole number of persons employed in 1831, in the growth and manufacture of wool, the product of provisions and other branches of business directly dependent thereon, at 162,000; and that, the value of the manufacture being 40 millions, \$24,750,000 of that sum passed into the hands of the agricultural population, for materials and supplies, and labor of all sorts, and profits earned by them.

We regard this as certain, that the growth and manufacture of wool in the United States has a greater value than the growth of cotton.

* It is supposed that one acre of pretty good land is necessary for the feeding of three sheep throughout the year—and especially in the northern States, including New York, where they more abound. The present number in the State just named is, probably, nearly 6,000,000. It was 3 1-2 millions in 1825.

† And certainly has not increased since—and the persons directly employed by them at 50,000

SAND—AS A MANURE.—Good arable land is proved to contain four primitive earths, the varied proportions of which form the different qualities of the soil. It appears that the silicious principle predominates in good land. M. Chapel found 40 per cent. of it in the most fertile soil on the banks of the Loire. For H. Davy extracted 80 from the best of the English soils; and Gicard found 79 in the most productive lands near Turin.

—M. Dutrochet made the experiment of covering with silicious sand, previously unproductive land, and by this means obtained crops as good as in the most (naturally) fertile soil in the vicinity, and gives it as his opinion that its great fertilizing virtue consists in its allowing both water and air to reach and penetrate to the roots of the vegetable, of which they form the two principal elements.

THE BREEDER & MANAGER.

From the Farmer's and Grazier's Guide.

NEAT CATTLE.

Of the necessity of dressing and cleaning neat cattle.

In the stable in which horses are kept, a brush and curry-comb are indispensable requisites; but in the cow-stable, these are rarely to be found: this can only arise from an opinion that cleanliness is not so essential to the cow as to the horse. This neglect is the source of many evils. Cows cannot be healthy, unless the insensible perspiration goes on regularly; and this cannot be the case when they are put into wet land, or kept in dirty houses, and no care taken to remove the dirt or matter by which the perspirable vessels or pores of the skin, are obstructed. In dairies where the dressing of cows is regularly practised, they are uniformly stronger, and in better condition; are less subject to diseases, and yield more milk, and that milk of a very superior quality.

Cows should be dressed once a day, and on no account should any dung be left on their coats. This operation will not be found difficult when it is regularly practised, and plenty of fresh litter allowed, and their dung often removed, that they may be prevented from lying down in it. Cows thus managed, will be found much more profitable than otherwise; and the improvement will be observable both in the dung heap and in the milk.

Many persons consider that if cows have sufficient food, it is all that is necessary; but we are convinced from experience—the best of all teachers—that however well cows are fed, they will not be found near so profitable as they would be, if the care and attention so essential to their cleanliness and well-being were duly attended to; while those that are thus taken care of, will be found to thrive even upon more indifferent food.

If the udder and teats of the cow are occasionally washed with warm water, those hard swellings, which are often very troublesome, will be prevented, as will also warts and other excrescences to which the udder is subject without this attention. The udder, and especially the teats, should be washed, immediately before the cow is milked.

Of foddering, or feeding.

In the various publications which have appeared relative to the management of neat cattle generally, but of milch cows in particular, there seems to be too much stress laid on the quality of food that should be given them, to the exclusion of a much more important consideration; namely, the health of the organ that is to digest and assimilate the food. This has been a very common error, and has led to the opinion, that the lactiferous powers of the cow may be increased to a great extent, merely by supplying the animal with that extra natural nutriment which is so abundantly found in the artificial grasses, and the various roots that are now getting into use. This is, however, a great mistake; the power of the organ is limited, and if we give the animal such food as exceeds either in quantity or quality the power of the organ which is to assimilate it, we are sure to defeat the object we endeavour to attain.

It has also been considered, and some experiments have been published to support the opinion, that by a judicious use of the artificial grasses in summer, and of the saccharine and mucilaginous roots in winter, the produce of milk may not only be increased, but even extended to a much greater length of time. A little reflection will, however, convince us, that in this, as well as in many other farming concerns, people want to take more out of a thing than its nature is capable of yielding: they want to kill the goose that has the property of laying the golden eggs, in order to get them before the proper time. But in this, as in every other thing of the same kind, such persons are blind to their own true interest.

The proper management of neat cattle, as well as of milch cows, is a very plain and simple thing. If we have a sufficient extent of old pastures for them, very little reflection upon the subject is necessary; but if we are compelled to have recourse to what are termed, artificial means, then it is that our skill and judgment are brought into trial.

Perhaps, by a judicious use of mangel-wurtzel, and other nutritious roots, we may promote and extend the lactiferous services of the cow in a considerable degree; yet we must never lose sight of the important truth, that the stomach, as well as the udder, are of limited power, and that the former must not be oppressed with an improper quantity of food, nor the latter with too much blood, however wholesome and nutritive the food may be.

It is one of the consequences of improper feeding, that it is the cause of difficult labour in the cow, and the occasion of the frequent necessity for the assistance of the cow-doctor in the delivery of the calf. Mr. J. White, in his Compendium of Cattle Medicine, describes the appearance which presented itself on opening a cow that had died from over-feeding. When she was near calving, she was kept in the field, and liberally supplied with hay (in winter): one morning, she was found dead, and her death was attributed to her having fallen into a sort of hollow, which was so inconsiderable that, had her stomach been free from the load that was found in it, she could undoubtedly have got up again." "I found," says Mr. White, "the rumen, or paunch, weighing nearly one hundred pounds, and the poor calf seemed to have been driven into a corner, and suffocated. I am decidedly of opinion," adds Mr. W. "that the cause of the peculiar difficulty in parturition, or rather the frequency of it, in the cow, is owing to improper feeding."

If we observe the intimate connexion which exists between the fourth stomach and the udder of the cow, we shall soon perceive the fact, that when the former becomes inflamed or disordered, the latter is sure to sympathise with it; and also that if the udder becomes materially injured, the stomach inevitably participates. This is another circumstance which should induce us to be very careful in feeding milch cows whenever we are under the necessity of taking them from their natural pastures.

When mangel-wurtzel was first introduced, it was given profusely and indiscriminately; and considerable injury was done in consequence. In the Farmers' Journal, (in 1814) it was stated, that

all Mr. Coke's cows were fed upon mangel-wurtzel, and that only, for a few days, strewed upon grass land, in the same manner that turnips are given in some counties; and that they were affected with the palsy, and some of them lost their milk; but that as soon as the mangel-wurtzel was discontinued, they began to recover. In the same Journal it is also stated, that when mangel-wurtzel was given by a practical farmer to his cattle in large quantities, and without hay, it in many instances caused a partial paralysis of the hind parts, the animals appearing as if they had been injured in the back. And yet it is added, that Lord Crewe gave nearly sixty pounds per day to milking cows with a proper proportion of hay, not only with impunity, but with the best effects.

In another number of the Farmers' Journal, it is stated, that in the spring of the year, Mr. Birch gave each cow a bushel of mangel-wurtzel daily. A sweet flavour was soon distinguishable in the milk, the quantity increased, and the butter partook of the sweet flavour of the milk. The cows were very healthy, and remained so throughout the summer. The second year's crop was given in part to the cows as soon as taken from the ground, and the same improvement was soon observed in the milk and the butter, as well as an improved condition of the cows. Mr. Birch wished to save a pasture for mowing that season, and reserved the other part of the roots till the spring; and in the month of May he found them as sound as when first gathered, and they remained so until the cows had finished them. The latter end of June, he gained his crop of hay, and delightful May butter, and his cows had all the appearance of the highest state of health.

The results of the following experiments will we think, be worth the farmer's attention.

On the morning of the 18th of October, two milch-cows, that had calved in the spring, were turned into an over-eaten pasture, and fed every morning and evening with hay only, and the products being measured at each meal, the result for one week was—one hundred quarts of milk, eleven pints of cream, and four pounds and a half of butter. The cows remained in the same pasture another week, and were fed with mangel-wurtzel and hay, each cow having half-a-bushel, sliced, and given to her morning and evening; the week's result was then found to be—one hundred and thirty quarts of milk, seventeen pints of cream, and six pounds and three quarters of butter. The next week the cows were fed upon hay only, and the result was only eighty-seven quarts of milk, eight pints and a half of cream, and three pounds and a half of butter.

In Ireland, the quantity given to each cow varies from twenty-five to one hundred and twelve pounds daily; and this is given not only without any bad results, but with considerable advantages, both as to the dairy and in feeding for the butcher: it is, however, accompanied by a moderate quantity of hay, and sometimes by an intermediate feed of turnips.

Mr. Pomeroy, an eminent farmer, ordered three wheelbarrowsful of this root, fresh pulled from the ground, to be thrown to his milch cows on a pasture. The food was so delicious, that they contended for exclusive possession; and the strongest

having succeeded, she continued to devour the roots with avidity, till they were all consumed, and herself gorged beyond the possibility of recovery. But in this case, instead of paralysis, the same symptoms took place as are caused by unrestrained feeding upon fresh clover. The rest of the cows were subsequently fed upon the same diet, but given in moderation, with a proportion of hay, and they continued in perfect health.

From all the observations it would appear that mangel-wurtzel is a valuable, nutritious root, well adapted to the feeding of cattle, and one from which no injury need be apprehended when proper care is taken in feeding the stock with a moderate quantity daily; like clover, turnips, and aftermath, it abounds in rich, nutritious matter, and when used for food must, like them, be accompanied with a proportion of hay.

It has been suggested, and very properly, that during the heat of summer, cows should be sheltered by suitable sheds, where they may be advantageously fed with tares, cabbages, turnips, potatoes, mangel-wurtzel, &c.; and it is most probable, that by indulging the animal in a little variety with regard to food, its health would be improved, and the formation of milk materially increased.

It is certainly of importance and most profitable to feed cows liberally, giving it them often and in small quantities, especially such as have been recently taken into the dairy; and it is no less so that their food should be of the best quality. It is an established fact, that a small quantity of food, well chosen, and of prime quality, is infinitely better than an abundance of such as is bad, or even only indifferent.

The fodder of cows is of two kinds: dry, and green;—the former is given in the stable; the latter usually in the fields. In the former case, a small quantity only should be given at a time, but that the more frequently. Cows are by this means prevented from gorging themselves; and the consequences resulting from indigestion are avoided; they are also prevented from weakening their appetite, or from having a distaste for their food from too much being put at one time before them, and blowing upon it. In eating only a small quantity at a time, they ruminate much better and with more ease, whereby digestion is greatly facilitated; and not only the health and condition of the animal kept up, but an abundance of rich milk also—the certain consequence attendant upon good feeding and perfect digestion.

We have given directions as to the proper use of mangel-wurtzel, and due cautious of the necessity of mixing it with hay; we shall also, as we proceed, have occasion to shew the superiority of steamed or cooked food, particularly potatoes, over that given raw, and in what manner turnips, cabbages, &c. may be given with most advantage; but there are times when all these may run short, or cannot be conveniently procured; it is also best occasionally to diversify the green food of cows, or neat cattle generally. On these several accounts, we shall state what plants may be given green, not only with safety, but in many cases with advantage.

The plants mostly in use for this purpose are—lucerne, trefoil, sainfoin, colewort, wild chicory, burnet;—the leaves and roots of carrots, radish, rape, cabbage, pumpkin, (or pompon;)—the

leaves or tender twigs of maize, (or Indian corn,) lettuce,—the leaves, stems, and tubercles of potatoes, and topinambour;—as well as the following generally:—prickly broom, parsley, orach, bistor, vetches, lentils, pea, and bean-shells, in short, almost all leguminous* plants, and the greater part of garden plants, as well as those which grow in the fields after harvest.

Young thistles produce a rich, creamy milk. The leaves and tender twigs of many kinds of trees, such as the acacia, elm, ash, maple, oak, melon, poplar, and the leaves and tendrils of the vine are aliments that may be occasionally employed with advantage, but only in very small quantities.

On the borders of the sea, in times of drought and scarcity, cows or neat cattle may be fed with the different species of *Algae* and *Fuci*, and *Cristis marinies*, after the plants have been bruised and boiled in fresh water. Buck-wheat and nettles do well in the poorest land. Cows readily eat the latter, either when mixed with straw, or steeped in hot-water for a night, and given in the morning altogether, the liquor being much relished by cows;—they also produce a large quantity of milk.

When roots are given to cows, it is necessary to cut them in slices, as otherwise there is danger of their choking them; an accident that often happens. There are some mills made for this purpose, which are simple, convenient, and not expensive. It is a fact sanctioned by experience and warranted by experiment, that roots, when cooked or boiled, are far more nourishing, and give more milk than when raw.

In several parts of England, France, Holland, Germany, Piedmont, and part of Italy, they give cooked food (by steam,) and find great advantage in it. Great caution is necessary in giving the young shoots of oak, ash, elm, or other trees; either of these, when eaten too freely, are apt to bring on red water, dysentery, and other serious and even mortal diseases.

Cows should never eat green fodder that has been lying in a heap till it is become hot; not only because it is difficult of digestion, but likewise from its being liable to bring on inflammatory and putrid disorders.

Cut straw and chaff may be added occasionally, but on no account should the husk of grain be ever given, it being perfectly indigestible, and consequently dangerous. Mr. Curwin, a respectable farming gentleman, says that he fed forty milch cows, and forty oxen, occasionally, with cut straw well steamed; and remarks, as a proof of its successful adoption, that they continued in very high condition; which he attributed to their warm food. He says, "The quantity of food used is but trifling; and very few of my milch cows that are not fit for the butcher, at the same time that the average of milk was between twelve and thirteen quarts upon three hundred and twenty days.

In 1798, the Bishop of Killalo, during a season of peculiar scarcity, fed his cattle upon his Lincolnshire estate, upon steamed potatoes; and notwithstanding the cattle for many miles round were generally in a deplorable state, his were in

the highest condition possible, solely from the effects of the food given them. But some accident happening to the steaming apparatus, his lordship was reduced to the necessity of feeding them principally upon raw potatoes; the consequence was, they immediately fell away to a state that is hardly credible. This is a most important fact; and shews the superior advantages of cooked food, even of the same kind, over that in the raw state.

Green fodder should not be brought in or out until the sun has dissipated the dew. It would be very dangerous to give it when covered with dew, as in that state it is difficult of digestion, and very apt to ferment in the first stomach, or men, and blow the animal, or blast it, as it is commonly called—a disease that often proves fatal, if not very shortly relieved.

CURE FOR HOVEN ANIMALS.—When animals have eaten too great a quantity of fresh plants, they become swelled, and often die in a few hours for want of proper treatment of the disease. In some countries they make a puncture into the abdomen and intestines, and thus let off the gas which distends the stomach and bowels; but this operation is attended with inconvenience and danger. As the distention is caused by the carbonic acid gas which is produced by the fermentation of herbage in the stomach, nothing is more efficacious than to make the animal swallow a substance with which the gas will combine. A spoonful of ammoniac mixed with a glass of water and given to the animal will absorb the gas in the stomach, and effect a speedy cure. Mr. Thenard has made use of ammoniac for 14 hoven cows, and the method has perfectly succeeded with 12 of them; the other two perished because the ammoniac was employed too late. Another person has used ammoniac with 2 cows, and both were immediately cured. [Perhaps other alkalies will be as effectual as ammoniac. The New England Farmer (No. 25, Vol 1) recommends a dose of eye, made with potash, pearlash, or house ashes.]

HORSES AND OXEN.—M. Dupetitmont, in a late agricultural work, examines the advantages of cultivating land by the labor of horses, and by that of oxen. He concludes that the food of horses costs twice as much as that of the oxen required to perform the same work; that horses have 261 kinds of diseases, and oxen only 47; and that the manure produced by a horse will enrich only half as much land as that furnished by an ox.

DOMESTIC ANIMALS.—*A great discovery.*—It is stated in a late foreign paper that Mr. Robin, a medical student at Paris, has succeeded in detecting the itch insect, which is sometimes so annoying to filthy persons. It resembles the mole in shape—and has a long proboscis, by which means it succeeds in burrowing beneath the curicle. Whether it has eyes or not, is not stated. The discovery has produced quite an excitement among the Savans at Paris.

MELANCHOLY.—The Pittsburgh (Pa.) Saturday Visitor says that there are now in that city more than five hundred adults who can neither read nor write!

* Leguminous plants are those whose seed or fruit are enclosed in a pod, as the pea, and bean, &c.

THE GARDENER.

[From the Young Gardener's Assistant]
ON TRAINING AND PRUNING FRUIT TREES AND VINES.

In training and pruning fruit trees, particular attention is required. To supply a tree with a sufficiency of vegetable juices, there must necessarily be living bark and wood, in an uninterrupted succession from the root to the extremities of the branches; pruning therefore is useful to remedy any defect, as well as to take off superfluous wood and prevent unnecessary waste of the sap. Pruning may be performed at different seasons of the year according to the kinds of fruit, which will be shewn under each head, as we proceed.

In the spring, or summer pruning, be careful not to destroy the germs of future fruits; but merely remove all unserviceable sprays. In the winter season, make your selection from the wood shoots of the preceding year; keep those which appear the most healthy, and cut away those which seem redundant. Beginners had better prefer the spring, as the buds will then be a guide for them to go by; but this business must not be delayed too late in the season, as some kinds of trees and vines are apt to bleed from being pruned untimely.—When the sap rises in Grape Vines, &c. before the wound is healed, bleeding ensues, and is not easily stopped. When this happens, sear the place, and cover it with melted wax, or with warm pitch spread upon a piece of bladder; or peel off the outside bark to some distance from the place; and then press into the pores of the wood a composition of pounded chalk and tar, mixed to the consistence of putty. Vines will bleed in autumn as well as in spring, though not so copiously at the former season. The best preventive is timeous or early pruning in the spring, and not pruning until the wood is thoroughly ripe in autumn. With respect to the manner in which vines, and some particular kinds of trees should be trained, opinions are at variance. Some advise training the shoots in a straight and direct manner, others in a horizontal manner, and others in a serpentine form, &c. If vines be trained on low walls or trellises, the horizontal or zigzag manner of training may be adopted. Horizontal training is that in which from a main stem, lateral branches are led out horizontally on each side.

It has been remarked that in order to be a good trainer of vines, a man must have some forethought, and be capable of making his selection, as the plants shoot. He must predetermine how he shall prune, and where he shall cut at the end of the season; and so as it were, fashion the plants to his mind. He has this more effectually in his power, with respect to the vine, than any other fruit tree, on account of its rapid growth and docility.

By attending to the proper pruning of fruit trees in the winter, every advantage is promoted, and by a judicious management in other respects, wood may not only be obtained but preserved in every part of the tree, and so that it will bear down to the very bole, which will evidently be greatly to the credit of the gardener, the benefit of

the proprietor, and will be equally conducive to the beauty and welfare of the tree. While trees are young, it is necessary to lay a good foundation for a supply of bearing wood in future years, for when this is neglected, and they become naked, it is some time before a supply can be recovered. In shortening a branch, always take care to cut in a direction a little sloping, and so that the slope may be parallel in a contrary way to the nearest bud left. It is requisite to have a very sharp knife, that the cut may not be ragged, but clean, and in the operation, must be careful that the knife does not slip, so that any other branch be cut or damaged. The general pruning of fruit trees is indifferently performed by many persons at any time from autumn to spring, and it may be done so without any great injury to them providing that mild weather is chosen for the purpose, and the wood is well ripened. Although it may be advantageous to prune trees early in the winter when the wood is well ripened, yet when the wood is green and the buds are not arrived at a mature state, it is requisite in such instances to defer pruning until spring, taking care however that it is performed before the moving of the sap. The necessity of this arises from the circumstance that as the wood is not ripened in autumn, the sap is then in an active state, and will continue so until the frost, &c. causes it to become stagnant, and if the shoots were shortened whilst the sap was in motion, the buds would be considerably injured and the tree weakened. Such unripe shoots are also more liable to suffer by the severity of winter, and when the pruning is deferred until spring, all such parts as may have been affected by the weather, can be removed to the extent to which the damage has been sustained.—As the pruning of such unripe wood in the autumn would be injurious, so it frequently is when it is done during winter, and the more so, according to the severity of it. Because, whenever a cut is made on such green wood, the frost generally affects it, as the sap is not dense, nor the wood so firm, as to be able to resist its intense heat. Whatever method is adopted in training trees, care should be taken to keep the two sides as nearly equal as possible; this may easily be done whether they are trained in the fan, or horizontal method.

For espalier trees the horizontal method has many advantages over any other; the small compass in which the trees are obliged to be kept requires such a direction for the branches, in order to make them fructiferous. And were very high trellises formed, so as to admit of the trees being trained in the fan method, such would be very objectionable by reason of the shade they would cause, and the trees would also be deprived of the benefit of a warmer temperature, which those less elevated receive, by the effects of which fruitfulness is considerably promoted.

As some young gardeners may not know what is meant by *espaliers*, it may be necessary to explain, that, espaliers are hedges of fruit trees, which are trained up regularly to a frame or trellis of wood work; they produce large fruit plentifully, without taking up much room, and may be planted in the kitchen garden without much inconvenience to its other products. For espalier fruit trees in the open ground a trellis is absolute-

ly necessary, and may either be formed of common stakes or poles, or of regular joinery work, according to taste or fancy.

The following article is selected as appropriate to our subject, from the fourth volume of the New York Farmer and Horticultural Repository, No. 1, page 3, communicated by that enterprising Horticulturist, J. Buel, Esq., of the Albany Nursery, and entitled *Hints on Pruning*:

The principal objects of pruning, are to procure a good bole or trunk for timber; to form a proper head for the production of fruit; and to subserve the purposes of ornament.

To effect these objects with the least trouble and greatest advantage, upon all non-resinous trees, the following rules are recommended:

1st. Begin to prune the tree when it is young.
2d. Cut close and smooth to the bole or limb.
3d. Cut, when small, the branches which are likely to interfere, or become useless, and which, if suffered to remain, will require to be removed at a more advanced period of growth.

4th. Do not trim to excess. Let the branches occupy at least a third of the entire height of a tree.

5th. Do not prune when the tree bleeds.

Where the preceding suggestions are observed, we may add—

6th. Prune in summer.

I proceed to offer my reasons for the rules here recommended—and,

First. The food required to nourish the lateral useless branches, will go to increase the diameter and height of the plant, or swell the fruit, if these are judiciously removed. But a main consideration is, that the excision of small branches causes only small wounds, and small wounds speedily heal. The observance of this rule, therefore, facilitates growth, promotes health, and ultimately saves labour.

Secondly. This rule needs very little argument to enforce its propriety, as every observer must have frequently seen and lamented the ruinous effects of an opposite practice. The snags either send out useless sprays, or deprived of the feeble aid of these, they die and rot, and carry disease into the bole, and are thus often the cause of the premature loss of the entire tree. If cut close, the enlargement of the living wood soon covers the wound. In large branches, where the saw must be used, the healing process is greatly facilitated, by paring the cut, particularly the exterior edges, with the pruning-knife; and it is a good precaution, before you use the saw, to notch under the intended cut, to prevent tearing the bark when the limb falls. In extirpating sprouts from the roots, and neither they nor those growing from the bole should be suffered long to remain, the like precaution of cutting close should be observed; for which purpose, it is necessary first to remove the earth from about the collar, with the spade or other instrument.

Thirdly. The reasons for pruning a tree while young, apply here: it is easier to cut small than large limbs, and the wounds of the former soonest heal. But the question presents, what limbs are to be cut? Generally all that are likely to cross each other, all feeble sprays, the strongest on the bole, and the weakest in the top; for while the trees are in the nursery, I think it ser-

viceable to leave a few scattering laterals upon the bole, and it is beneficial, at all ages, to thin most kinds in the lop. Yet the answer to the inquiry will depend principally upon the species of tree, and the design of the planter. If his object be timber, the leading shoot should be feathered up in a spiral form, and all other shoots likely to interfere with its growth, be cut away. If the object be fruit, beauty and utility are to be consulted, and these are seldom incompatible in the eyes of a fruit-grower, for with him productiveness constitutes beauty. If ornament be the main consideration, no special directions can be given, as the species employed, the location, and the taste and fancy of the planter, will have a controlling influence. The rule for timber trees will not apply to either those destined for fruit or ornament.

In orchard and garden fruit, generally, the endeavour should be to obtain a low and spreading top. When a clean hole is obtained to a sufficient height, say in the orchard, of seven or eight feet, and in the garden according to fancy, the leading shoot should be cut in, and three or more arms or branches left to form the head; which, when the habit of the tree will permit it, should be pruned so as to give it a besom form, or that of a broom divested of its centre. Several advantages arise from this and a more expanded form. It admits the air and sun more freely, to mature the fruit and wood; it renders the tree less liable to be blown down; it facilitates the gathering of the fruit, and the pruning of the tree. But the principal advantage consists in its tendency to increase oviparous or fruit buds, and consequently to augment the fruit. A great growth of wood seems to be incompatible with a great crop of fruit, and vice versa. A cow which gives much milk seldom takes on much flesh during the milking season. If the secreted food is converted into milk and fruit, there can be but little reasonable hope of its adding to the flesh of the animal, or the wood of the vegetable. Erect branches produce most wood buds, horizontal branches the most fruit buds. Straight limbs produce less fruit than those that are curved or crooked. Whatever retards or diminishes the flow of elaborated sap, in a healthy tree, is favorable to the production of fruit. Hence wall trees, whose limbs are trained in the form of a fan, or in a horizontal direction, fruit better than those that grow upright as standards. Hence young trees are more apt to show blossoms the first and second year after transplanting, than in the two subsequent years. Pomologists have endeavoured to render this law of vegetation subservient to their interests, by adopting artificial means for inducing the production of fruit buds. These means consist in ring-barking, transplanting, cutting the roots, training, pruning, &c. The pears in the Caledonian Horticultural Gardens are trained *en quenouille*, that is, the lateral branches are cut in to a short distance of the main stem, and kept so, and the fruit is produced on the spurs growing from these shortened branches. In the Horticultural Garden of London, the limbs of the Pear are tied down in a drooping position, resembling somewhat in appearance the weeping willow. The vines cultivated at Thomery, celebrated for their superior fruit, are planted eighteen inches apart, trained in the form of a T, the top horizontally, and restrict-

ed in their growth to four feet from the main stem. In this way a trellise of eight feet long, and eight feet high, is sufficient for five vines, which produce upon an average 320 bunches of fruit. These modes of training have a common object, that of restricting the growth of wood, and producing an increase of fruit. Those who wish to examine the modes of training here spoken of, in detail, are referred to Loudon's Gardener's Magazine.

Fourthly. Leaves are as necessary in the economy of vegetation as roots. The sap must be elaborated in these before it can be transmuted into wood, bark, or fruit. A tree cannot thrive, therefore, when these organs are either deficient or diseased. If sufficient leaves, or branches to produce them, are not left to concoct, or digest the sap which is propelled from the roots, the tree, to use a modern term, but a just comparison, becomes *dyspeptic*, the vegetable blood is vivified, the wood loses its texture, and a stunted growth, or premature death generally ensues. Hence great precaution should be used against excessive pruning.

Fifthly. To prune when the tree bleeds, tends to debilitate, by wasting what is designed as food for the tree. I have known it fatal to the vine. What is termed bleeding, is the flowing of the sap from wounds before it has been converted into aliment. This sap flows most freely while the buds are swelling, and until the leaves are fully capable of discharging their office, as is strongly instanced in the maple, birch, &c. Our orchards are generally pruned in March, which is probably the most unfavorable month in the year for this operation.

Sixthly. The advantages of summer pruning are, that the tree being then in vigorous growth, the wounds heal speedily; and the sap being concocted and thick, does not flow from the wounds, and thereby impair the health of the plant. Summer pruning should not be performed, however, before July, when the new growth has considerably advanced. It may be well to add, as this suggestion may seem unsound, that summer pruning is recommended by the best authorities. "As a general rule," says Pontey, "summer is preferable to winter pruning;" and Sang suspends pruning "from the beginning of February to the middle of July, but carries it on during every other month of the year."*

In regard to evergreens, which with us are confined principally to resinous trees, it is the general practice of nursery-men, and I think it a judicious one, not to prune them till they have acquired some years' growth, and then but sparingly and at long intervals, displacing two or three tiers of the lower branches every two or three years. Monteith says, "never cut off a branch till it has

begun to rot, as the bleeding of a live branch will go far to kill the tree."

The implements employed in pruning, and the manner of using them, are matters of moment. If the operation is commenced when the tree is young, and judiciously followed up, a good knife, a small saw, and a chisel fixed on a six foot handle, to trim the tops and extremities of the branches, are all the tools that are required. A large saw will be occasionally wanted; but an axe or hatchet should never be employed, as they fracture the wood, bruise and tear the bark, and disfigure the tree.

MISCELLANEOUS.

POPULAR SCIENCE.—The conviction of the great importance of geological surveys is spreading over the United States. Governor Vroom, of New Jersey, in his late message to the Legislature, recommended a scientific investigation of the mineral resources of that State. An impression of the importance of such an investigation is prevalent in our neighbor, Delaware. A correspondent of the National Gazette complains of the want of scientific research into the immense mineral deposits in Pennsylvania, and consequent loss to the inhabitants of the State. "The coal fields on the Schuylkill," he says, "were ushered into notice by chance. If sheer chance has worked this result, what might we expect from science?" The Geological Society of Pennsylvania is, however, now moving in the subject. Mr. Featherstonhaugh has been commissioned by the General Government to make a geological examination of the territory of Arkansas, and make a report to Congress at the approaching session. Our own State has the credit of being among the earliest to perceive the vast importance of a geological survey and to provide for it. We understand that the state geologist has already collected at Annapolis and classified according to counties a large number of specimens. When this state cabinet shall be completed, it will be an invaluable index to the mineral resources of the state.

Balt. American.

A GRAIN OF CORN.—One grain of corn, dropped by accident on the land of Major Jacob Clark, of Durham, Mass. yielded this year, nine ears, with sixteen rows each, averaging 40 kernels to each row, and making the whole product of the single grain about five thousand.

Popular applause.—Though ten thousand tongues should chant our praises, they would sound unharmonious in our ears, if *conscience* join not in the choir!

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* The Gardener's Magazine for October, has a communication from John Bowers, recommending summer as having a decided preference. The growth of trees thus pruned, he says, far exceeds that of the winter pruned. He commenced the practice in 1826, when his trees were six feet high; and in the autumn of 1829, they were 20 feet. He has this year summer-pruned 100 acres of young plantations, which in August were stated to be remarkably thriving and healthy.

BALTIMORE PRODUCE MARKET.

* These prices are carefully corrected every Monday.

	PER.	FROM	TO
BRANS, white field,	bushel.	3 00	
COTTON, on the hoof,	100lbs.	5 00	5 50
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	50	52
White,	"	50	52
COTTON, Virginia,	pound.	13	15
North Carolina,	"	14	16
Upland,	"	14	16
FEATHERS,	pound.	36	
FLAXED,	bushel.	1 62	1 65
FLOWER—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's,	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 75	4 87
" wagon price,	"	4 75	
CITY MILLS, extra,	"	5 12	6 25
Do.	"	4 87	5 00
Susquehanna,	"	5 25	
Rye,	"		
GRASS SEEDS, red Clover,	bushel.	5 00	6 00
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	
HAY, in bulk,	ton.	15 00	
Hemp, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
Hogs, on the hoof,	100lb.	4 87	5 00
Slaughtered,	"	5 00	5 50
Hogs—first sort,	pound.	15	
second,	"	13	
refuse,	"	11	
LIME,	bush.	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	32
PEAS, red eye,	bushel.	60	
Black eye,	"	87	100
Lady,	"	10	
PLASTER PARIS, in the stone,	ton.	3 12	
Ground,	barrel.	1 37	
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	64	66
TOBACCO, crop, common,	100 lbs	4 50	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	
Rappahannock,	"		
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 03	1 09
Red,	"	95	1 60
WHISKEY, 1st pf. in bbls.	gallon.	32	33
" in hds.	"	294	
" wagon price,	"	27	28
WAGON FREIGHTS, to Pittsburgh,	100 lbs	—	1 37
To Wheeling,	"	washed.	1 50
WOOL, Prime & Saxon Fleece,	pound.	50 to 60	24 to 26
Full Merino,	"	44	50 22 24
Three fourths Merino,	"	37	44 22 24
One half do.	"	33	37 22 24
Common & one fourth Meri.	"	30	33 20 22
Pulled,	"	31	38 22 24

WESTPHALIA GEESE.

A FEW pairs of these very superior Geese are now ready for delivery at 5 dollars a pair. Apply to I. I. HITCHCOCK, Amer. Far. Estab.

WHITE TURKIES.

I HAVE now ready for sale several pairs of these truly beautiful fowls, at \$5 a pair, they are of this year's crop. I. I. HITCHCOCK, American Farmer Establishment.

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BALTIMORE PROVISION MARKET.

	PER.	FROM	TO
APPLES,.....	barrel.	2 50	44 00
BACON, hams, new,.....	pound.	11	
Shoulders,.....	"	8	9
Middlings,.....	"		
BUTTER, printed, in lbs. & half lbs. Roll,.....	"	25	37
"	"	15	25
CIDER,.....	barrel.	3 00	4 00
CALVES, three to six weeks old,.....	each.	4 00	7 00
Cows, new milk,.....	"	22 00	30 00
Dry,.....	"	9 00	12 00
CORN MEAL, for family use,.....	100lbs.	1 56	1 62
CHOC RYE,.....	"	1 56	1 62
Eggs,.....	dozen.	19	20
FISH, Shad, salted,.....	barrel.	5 75	6 00
Herring, salted, No. 1,.....	"	4 75	
Mackerel, No. 1, 2 & 3,.....	"	4 87	6 75
Cod, salted,.....	cwt.	2 50	3 00
LAMBS, alive,.....	each.	1 25	2 00
Slaughtered,.....	quart'r	31	50
LARD,.....	pound.	8	9
ONIONS,.....	bushel.	62	75
POULTRY, Fowls,.....	dozen.	2 50	
Chickens,.....	"	1 75	2 00
Ducks,.....	"		2 50
POTATOES, Irish,.....	bushel.	40	62
Sweet,.....	"	62	75
TURNIP,.....	"	37	50
VEAL, fore quarters,.....	pound.	34	4
Hind do.	"	64	

ADVERTISEMENTS

TO NURSERY MEN.

1630 Peach Stocks—One year old.
45 do. do.—two years old.
520 Fear do. two do. do.
740 Apple do. two do. do.
For sale cheap. Enquire at this Establishment. Dec 9.

GRAPE VINES.

HERMANT'S Madeira, one, two, and three years old, from 25 cents to 75 each.

Isabella, two and three years old, at 25 to 50 cts each. Catawba, one year old, 25 cts. each. White Scuppernong, two years old, at 37½ cents each. Sultan, one year old, at 50 cts. each. Woodson, two years old, at 37½ cents each. Red Bland, one year old, at 25 cts. each.

Are for sale at this establishment, and will be well packed to go any distance. no. 25

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

PEA FOWLS.

ONE pair 2 years old, and one pair 3 years old, for sale at this establishment. Price \$3 a pair. no 4

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with particular directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, \$5 per dozen, or \$40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over all others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of every farmer as a most valuable acquisition.

I. I. HITCHCOCK,
Amer. Far. Estab.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment of Bulbous Roots, suitable for the present season, for sale low at this establishment by Oct. 28.

I. I. HITCHCOCK.

BAKEWELL RAMS.

TWO Bakewell Rams of good size and quality, for sale by a farmer near Baltimore at \$20 each. Apply to

I. I. HITCHCOCK,

FRUIT TREES—CHEAP.

An Invoice of fruit trees from a first rate nursery, having been mislaid, is offered by the owner for sale at a reduced amount. The opportunity is a favorable one for procuring a lot of first rate trees, at a great bargain. The following is a list of the trees which are laid in the ground by the heels so as to continue unharmed till next spring if necessary.

APPLES.

- 2 Monstrous Pippin.
- 2 Flushing or Esopus Spitzburgh.
- 2 Royal Pearmain.
- 2 Long Island Russet.
- 2 Winter Pearmain.
- 2 Alexander—a new Russian apple, very large and of great celebrity.
- 2 Rhode Island Greening.
- 2 Pomme d'api, or Lady apple.
- 2 Carthouse.
- 2 Newtown Spitzburgh.
- 2 Bellflower.
- 2 Vandevere.
- 2 Red sweet Vandevere.
- 2 Michael Henry Pippin.
- 1 Winesap.
- 1 Rambo or Romanite.
- 1 Large Yellow Newtown Pippin.
- 6 York Greening.
- 7 Red Streak.

PEACHES.

- 1 Teton de Venus.
- 4 Malacat.
- 1 Lehman's cling.
- 2 Gough's Cling.
- 3 Oblong open Peach.
- 1 Fine Cling.
- 2 Early Etna.
- 4 Budded trees that have lost their labels.

PEARS.

- 2 Jagoneillo.
- 1 Portugal.
- 1 Summer bergamot.
- 1 Amberg.
- 1 Butter.
- 1 Seckel.
- 2 St. Germaine.

PLUMS.

- 1 Peters' large Yellow Gage.
- 1 French do. do.
- 1 Gage.
- 1 Egg.
- 1 Imperial.
- 1 Bolmar's Washington.
- 1 Blue Damascene.

CHERRIES.

- 2 Morollo.
- 1 Orleans.
- 2 May Duke.

QUINCES.

- 1 Portugal.
- 1 Orange.

The Invoice including packing mats, &c amounts to \$30, and the whole will be sold for \$20, which may be sent to

I. I. HITCHCOCK.

Amer. Farm. Estab.

AGENCY FOR TREES, &c.

THE subscriber respectfully offers his services to his customers and the public generally, as agent for the procurement of Fruit and other Trees. It may not be generally understood or duly considered, that few nurseries contain all kinds of trees in equal perfection. One, for instance, is celebrated for its fine apple trees, another for its peaches, and a third for its plums or pears, while scarce any of them can make up a collection of all kinds of trees of the best quality. In this respect the subscriber flatters himself that he possesses peculiar advantages. His own nursery is not extensive or forward enough to afford many trees for sale yet, and his acquaintance with nearly all the most eminent nurserymen in this country, and of the peculiar excellencies of their respective establishments enables him to select from them all, probably a better collection of fruit trees than any one of them can furnish. Trees ordered from any particular nursery, or to be selected by me, will be charged at nursery prices and 10 per cent commission added. Orders ought to be forwarded immediately, and all confided to the subscriber's agency shall receive his best attention.

I. I. HITCHCOCK,